Chapter 7
Cigarette Smoking Among Youth: A Regional Health Problem

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7.1 Introduction

Tobacco contains nicotine, which is a drug, and for which cigarette smoking is its delivery system. Nicotine found in the smoke of cigarettes can, through repeated use, result in addiction. Cigarette smoking allows nicotine to be inhaled through the lungs. For secondary or passive cigarette exposure, the nicotine is absorbed through the mucosal lining of the mouth or nose or through the skin. After inhalation or absorption, nicotine passes rapidly into the arterial bloodstream and then into the brain (Benowitz, 1996).

Tobacco use through cigarette smoking is considered to be the most important preventable cause of death and disease in the world. The substance has caused 100 million deaths in the twentieth century, it causes more than 5 million deaths per year, and, if current trends continue, it will cause up to one billion deaths in the twenty-first century; unchecked, tobacco-related deaths will increase to more than 8 million per year by 2030 (WHO, 2011). On average, smokers die 13–14 years earlier than nonsmokers (CDC, 2012a).

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According to the World Health Organization, (WHO, 2011), the tobacco epidemic is one of the biggest public health problems the world has ever experienced, and there are over a billion smokers in the world. Nearly 20 % of the world's adult population smokes cigarettes, and half of all smokers will die from smoking (Proctor, 2012). This is one-third of the world's adult population—about 800 million men and 200 million women smoke cigarettes. Nearly 80 % of the world's smokers worldwide are from low- and middle-income countries where the burden of tobacco-related illness and death is heaviest. Tobacco users who die prematurely deprive their families of income, raise the cost of healthcare, and hinder economic development (WHO, 2011). In developed countries, 41 % of men and 21 % of women regularly smoke (Taylor & Bettcher, 2000; WLF/ACA, 2012a).

Over the past decade, 50 million people in the world have been killed as a result of using tobacco. In the United States, tobacco use is responsible for one in five deaths annually (i.e. about 443,000 deaths per year). In the European Union countries, the number is 500,000 deaths per year and about two million deaths in other countries throughout the world with a high proportion coming from people living in the poorest areas (Isralowitz, 2004a; Peto & Lopez, 2001).

The burden of death, disease, and disability caused by the use of tobacco products more than outweighs the economic benefits from their manufacture and sale (WLF/ACA, 2012a). In the United States alone, each year, cigarette smoking costs more than $193 billion (i.e. $97 billion in lost productivity plus $96 billion in healthcare expenditures). Secondhand smoke costs more than $10 billion in healthcare expenditures, morbidity, and mortality (CDC, 2012a, 2012b).

Secondhand smoke exposure kills those people who do not smoke. The smoke from someone using tobacco contains higher concentrations of cancer-causing carcinogens than mainstream smoke. Breathing second hand smoke causes harm to the cardiovascular and respiratory systems, and it can cause lung cancer. Expectant mothers, fetuses, and infants exposed to secondhand smoke are at particularly high risk of adverse health consequences including sudden infant death syndrome (SIDS), respiratory issues, and behavioral and learning problems (CDC, 2014; WLF/ACA, 2012b). In the United States, an estimated 42,000 of these smoking-related deaths are the result of secondhand smoke exposure (CDC, 2015a, 2015b).

7.2 Adolescent Tobacco Use

Cigarette smoking among young people is a major public health concern. Tobacco use is started and established as a behavior primarily during adolescence (Flay, 1993; Pierce & Gilpin, 1995; Sussman, Dent, & Lichtman, 2001). More than 80 % of adult smokers began smoking before 18 years of age. Each day in the United States, approximately 3,800 youth under age 18 smoke their first cigarette, and approximately one-third become daily cigarette smokers (CDC, 2015c). Young people grossly underestimate the addictiveness of nicotine. Of daily smokers who think that they will not smoke in 5 years, nearly 75 % are still smoking in 5–6 years. Even more concerning is that once adolescents develop a regular smoking habit, it

can be as difficult for them to stop as it is for adults (Eckhardt, Woodruff, & Elder, 1994; Elders, Perry, Eriksen, & Giovino, 1994; Ellickson, Tucker, & Klein, 2001; Sussman, Dent, et al., 2001).

Worldwide, 14 % of the youth aged 13–15 smoke and a quarter of all children who do smoke started by age 10. In 1995 a group of 22 international organizations and individuals met at the Rockefeller Foundation's Bellagio Study and Conference Center in Italy to examine the implications of the current global trend in tobacco production and consumption, especially in developing countries, for sustainable development. Regarding children and youth, it was reported that 300 million will eventually be killed by tobacco use based on current smoking patterns.

> According to the American Legacy Foundation (2001), teenage tobacco users are 14 times more likely to use marijuana than their nonsmoking peers. Other effects include: smoking hurts young people's physical fitness in terms of both performance and endurance—even among young people trained in competitive running; smoking by youth can hinder their rate of lung growth and the level of maximum lung function; the resting heart rates of young people are two to three beats per minute faster than nonsmokers; the younger people start smoking cigarettes, the more likely they are to become strongly addicted to nicotine; smoking is associated with poor overall health and a variety of short-term adverse health effects in young people; and it may also be a marker for underlying mental health problems such as depression among adolescents (Arday et al., 1995).

The most common information collected on tobacco use among youth tends to be specific to those in school. Information of this nature is valuable for the identification of trends and attitudes as well as the promotion of prevention measures. Such information, however, does not reflect the extent of smoking among an underserved high-risk population of youth with learning and/or behavioral problems who have been placed in alternative schools, truants, or dropouts (United Nations, 1999). Additional research and smoking cessation intervention for such youth is particularly important because of their high-risk status for drug use and related problem behavior (Lantz et al., 2000; Sussman, Arriaza, & Grigsby, 2014).

Regarding gender status, the gap between smoking rates among boys and girls is not as large as one would expect. Boys are more likely than girls to smoke, but in almost 60 % of countries covered by the Global Youth Tobacco Survey (GYTS), there was no significant difference in smoking rates based on gender status. The factors that increase the risk of girls smoking are broadly similar to those of boys: tobacco industry marketing; easy access to tobacco products; low prices; peer pressure; tobacco use and approval by peers, parents, and siblings; and, the misperception that smoking enhances social popularity. In cultures where women are subjected to unrealistic body-image ideals, girls and young women may initiate smoking or rationalize their addiction in the mistaken belief that smoking assists with weight loss (Isralowitz & Troestler, 1996; WLF/ACA, 2012a, pp. 28–30).

7.2.1 *Israeli and Palestinian Youth: Regional Perspective*

Smoking rates are problematic among Israeli and Palestinian people. According to the World Health Organization, there are high daily smoking rates among Israeli males aged 20–24 (48 %) and 25–34 (49 %) as well as females aged 35–44 (27 %). A 2012 Israel Ministry of Health report states that 20 % of Israel's population (1.5 million people) smokes an average of 20 cigarettes a day (Vertnik & Lozinski, 2012). Among Israeli youth, an estimated 24 % of males and 13 % of female students aged 15–18 smoke (Godeau, Rahav, & Hublet, 2004), and it has been reported that 17 % males and 12 % females aged 13–15 smoke daily (Shafey, Eriksen, Ross, & Mackay, 2009). Among high-risk youth, the last 30-day smoking levels are high (Bar Hamburger, Rahav, Teichman, Gil, & Rosenblum, 2002; Isralowitz, Afifi, & Sussman, 2008; Isralowitz, Reznik, & Sussman, 2009) and research shows that it is highly correlated with problem behavior. For example, findings show 84 % of the youth in residential treatment facilities for drug addiction smoke regularly (last 30 days); 65 % of youth referred to probation services because of delinquent activity smoke regularly; 32 % of youth who dropped out of school and/or who are not working smoke regularly; and, 29 % of youth in alternative schools because of learning difficulties or behavior problems smoke regularly (Isralowitz, 2004b; Isralowitz & Rawson, 2006; Isralowitz & Reznik, 2006). In a study of more than 2,000 youth in Gaza and the West Bank, it has been found that 26 % smoke regularly compared to 17 % reported in 1999 (Afifi & El Sousi, 2006).

7.3 Smoking Cessation: An Evidenced-Based Model in the Middle East

Smoking prevention and cessation is relevant to developed and developing countries, and "the need to expand comprehensive and effective tobacco prevention and control programs is well established" (Campbell et al., 2008; Sussman et al., 2004). Based on a comprehensive review of evidenced-based smoking cessation programs, Project EX was selected to address cigarette smoking among high-risk Palestinian and Israeli adolescents (SAMHSA, 2012).

Project EX, developed by University of Southern California experts, promotes self-management and resilience abilities for youth through motivation, stress and anger management, coping with nicotine withdrawal, avoiding relapse, and use of alternative medicine strategies (e.g., yoga, meditation), imparted in ways found to be enjoyable among US young smokers (Sussman, Lichtman, & Dent, 2001). The intervention was designed to provide youth with eight 40- to 45-min sessions delivered over a 6-week period using engaging and motivating activities such as games and yoga to reduce or stop smoking. As designed, two sessions are delivered per week for the first 2 weeks of the program, followed by one session per week the subsequent 4 weeks, to follow youth through an acute withdrawal period. Youth are provided with accurate information about the social, emotional, environmental, and physiological

consequences of tobacco use. The first four sessions are intended to prepare youth for an attempt at quitting smoking, which should take place between sessions four and six. The remaining sessions are designed to maintain quit status and enhance quit attempts. Project EX "clinics" operate during school hours. Each clinic group can accommodate 8–15 students. At the completion of the program, youth are expected to (1) stop or reduce cigarette smoking and (2) state accurate information about environmental, social physiological, and emotional consequences of tobacco use. An overview of Project EX is available at https://www.crimesolutions.gov/ProgramDetails.aspx?ID=336.

7.4 Regional Youth: "If the Shoe Doesn't Fit—What Then"?

After months of organization development and delay, including war between Israel and Gaza (December, 2008–January 2009), the Israeli and Palestinian project leaders were able to organize their team members for Project EX training. The training, held in Jerusalem, and led by Dr. Sussman, the primary developer of Project EX, involved six Israeli and six Palestinian personnel. The training included materials, discussion, and role playing for the EX sessions.

Soon after the Jerusalem training, the eight-session Project EX model was presented as a trial initiative at a major residential education facility in the Negev region of Israel and selected sites in Gaza and the West Bank. The subjects were high-risk youth aged 12–18 ($n = 122$). The following details reflect pilot study results of Project EX:

1. There is a need to change the number of meetings. In practice, it is difficult to arrange eight sequential meetings because of holidays, pupils' activities, field trips, school events, etc. Such distractions hurt program continuity and regular attendance.
2. A high level of commitment was required from the project guides. It required work prior to each meeting—preparing the meeting; writing small notes; preparing the equipment, food, and drinks; reading additional material about smoking; and reminding the pupils and the staff about the meeting. The required time for guidance of the project is longer than expected. A person with a lower level of commitment will not be able to guide the project in the best way possible. From our experience, not many teachers have this high level of commitment; therefore, we suggest that someone on behalf of the project work with them.
3. Personal conversations with pupils in need of support are a necessity. All pupils who quit smoking need assistance with personal conversations once every 2 weeks and phone call support from a committed person.
4. The pupils did not like the fact that the guides (i.e. EX instructors) read from the booklet. The response for the reading was "Don't you know the material?" The pupil sees reading from a paper as lack of experience. Therefore, guides had to memorize and write guidance notes on small papers.
5. If older students are involved in the project, it should begin very early in the study year. From the moment national exams start, students are less committed

emotionally and cognitively for Project EX training. The time recommended for starting the project is after the religious holidays.
6. We think that a model, guided by someone other than the classroom teacher, should be considered to promote and implement Project EX. We believe that without this approach, teachers will guide the project poorly or not at all.

Key additional comments included that the contract of the participant to quit smoking should be more detailed. Also, the pupils' recruitment needs to be reassessed because pupils that were caught smoking were obligated to participate and other pupils chose to participate—the majority of the pupils were obligated. It was thought that detoxification/withdrawal should begin early on in the project; it's important not to talk too much about smoking damage; the participant's questions should be answered in detail but not to the point of frightening them. Also, it was suggested that program graduate diplomas might be a good idea, so the pupils feel they have been through something significant.

1. The pupils could not relate to the "talk-show" method and asked for other activities (the talk show is not a part of the Israeli and Palestinian cultures).
2. The pupils did not relate to yoga and considered it "uncool." Perhaps stretching exercises will be more interesting for them or exercises from other fields such as breathing exercises and muscles flexing and relaxation (the advantages of these techniques is that they are applicable everywhere).
3. Using a CO2 device might be good to promote understanding of the level of nicotine in the body and also to help understand how much you can decrease the amount.
4. The program does not provide information about smoking withdrawal aids. This was a difficulty for heavy smokers. Some of the smokers asked us about it, and some even addressed doctors independently. It seems the information may be useful to heavy smokers. (NOTE: Project EX does provide information about smoking withdrawal aids. However, very detailed information is not provided).
5. It might be good to exchange the talk-show method with a visual presentation that helps send important messages. The talk show takes longer than the estimated time since it takes time for the pupils to become energized.
6. Mandatory attendance to the sessions is important.
7. When some of the pupils start to try to quit, it is good to dedicate more time in the beginning of the meeting to see how are they doing, how they are feeling, did they have breaking points and how did they overcome them, and also to reinforce them on their efforts.
8. Food and drink increase attendance.
9. It's important to produce summary cards for the guides.
10. A board and a pen are very important in every meeting. To promote understanding of some of the key points and information, it is helpful if they are written.

The Israeli and Palestinian project organizers discussed the trial outcome and concluded that there was a need to rethink the initiative, making it a three-session "brief intervention" using an external trainer rather than "in-school" personnel. Among the

key reasons were scheduling difficulties with participating schools. Eight sessions over 6 weeks required a level of planning and organizations that was not consistent with the prevailing time lines in the region including expected barriers (i.e. holidays, scheduled activities, teacher's lack of readiness to commit to a health intervention, staff turnover, etc.) and unexpected events (e.g., regional hostility including missile attacks and retaliatory air strikes, and/or teacher absence). In May 2010, an announcement was issued to the US project consultant of this US evidenced-based model in a way similar to Apollo 13 (movie version) contacting NASA-"Houston we have a problem." The consultant advised a five-session approach as a minimum. The Israeli and Palestinian project directors insisted that a three-session "brief intervention" was needed. The US consultant provided input to revise the effort and curriculum. He took a primary responsibility to shape the direction of the three-session version and, at the request of the Israeli and Palestinian investigators, utilized a prevention/cessation format (so that smokers would not be identified and get in trouble and nonsmokers would be included). The sessions were modified to include (1) thinking about quitting or not using tobacco in the future: time = 32–40 min; (2) taking action to quit or not use tobacco in the future: time = 57 min; and, (3) staying stopped or maintaining commitment not to use tobacco in the future: time = 40 min.

Evaluation: Did the Intervention Work? War, the death of project personnel, and other obstacles did not prevent the Israeli and Palestinian project organizers from completing this effort—a model of organization and resilience among the project organizers.

7.4.1 Israeli Findings: Summary

There are important limitations in the study design including that absence of a comparison group, so inferences are limited status. Nevertheless, the results are promising. Overall, males and females reported less smoking last month as a result of the intervention: 29.0 % (pre test), 22.7 (posttest), and 15.0 % (post-posttest) ($p < 0.01$) (Fig. 7.1).

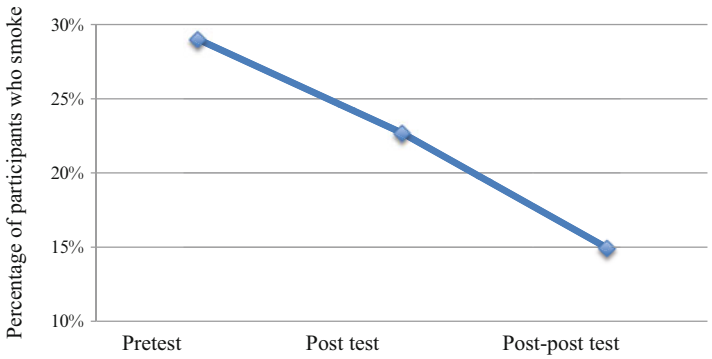

Fig. 7.1 Last month of smoking

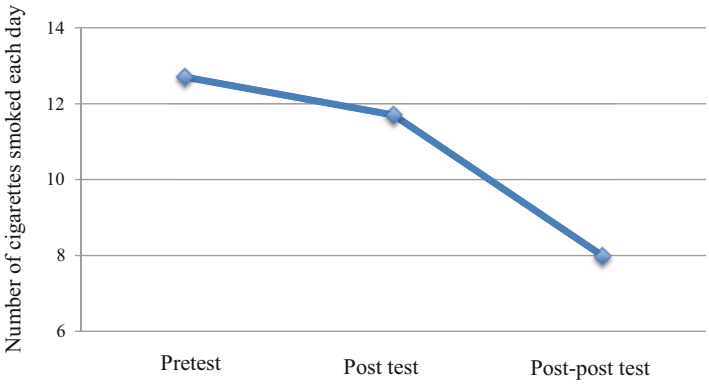

Fig. 7.2 Smoking cigarettes each day (mean): male and female total

Figure 7.2 shows findings from the three-session Project EX brief intervention with secular school male and female students. A significant downward pattern of daily cigarette use was found, including a decrease from nearly 13 to 8 cigarettes each day among non-quitters. It was also found that smoking a cigarette offered from a friend declined from 29 to 21 % and the number of close friends who smoke declined from 79.5 to 59.2 % ($p < 0.001$). Also, religious males reflect a downward trend in cigarette use from 9 to 7 cigarettes each day among non-quitters, a lowering of smoking a cigarette obtained from a friend from 19 to 17 %, and smoking youth tend to have friends who do the same—smoke cigarettes. And, males and females who smoke on a daily basis reported a downward trend in cigarette use–males from 12 to 8 cigarettes each day and females from 13 to 7 cigarettes each day. Females reported they were less likely to smoke a cigarette obtained from a friend from 72 to 60 %. Finally, the responses of "same" students on a before-and-after intervention basis showed that the three-session brief intervention tends to have a positive influence on smoking cessation among male and female, secular and religious students.

7.4.2 Focus Group Assessment

Students ($n = 12$), aged 12–18, who received the brief intervention were asked questions about their perceptions, opinions, beliefs, and attitudes toward the effort. The interview questions, presented by teams of interviewers trained in focus group qualitative interviewing by Dr. Patricia A. Findley of Rutgers University (coeditor of this volume) who visited the Regional Alcohol and Drug Resources Center, Ben-Gurion University, as a Fulbright Scholar, are listed in Fig. 7.3.

Among the significant results from the focus group discussions were: (1) participants felt that the brief intervention needed to be presented by a well-trained professional and not their "in-house" counselors at the high school.

Focus Group Questions

1. What the youth remembered about the Project EX workshops?
2. What makes people quit smoking?
3. What happens after stop smoking?
4. What did the participants take from the workshop?
5. What could be done to follow-up and reinforce non-smoking behavior?
6. What should be changed or done differently?
7. What was most significant for the participant of the Project EX experience? What was positive; what was negative?

Fig. 7.3 Focus group questions

A "more serious" presentation could be given by an outside consultant; (2) evaluation of the experience should be completed soon after the experience since many students forgot the impact of the effort, especially if there is no ongoing smoking cessation follow-up activities; (3) the data collection instrument needed to be shortened, especially if it is going to be used repeatedly over time; (4) redesign or adaptation of the program should be done with youth input, especially those who went through the Project EX experience; and, (5) more attention needs to be given to follow-up and strengthening positive outcomes results from Project EX.

7.4.3 Palestinian Findings: Summary

The smoking cessation project involved a group of school-age Muslim males and females with an average age of 16 years. Among the findings, 23 % males and 7 % females reported lifetime smoking; and, 19 % males and 5 % females reported last month smoking (Figs. 7.4 and 7.5). The average start age of smoking was 11 years for males and 14 years for females. Five percent of the youth smoking in the last month were with one parent compared to 14 % of the nonsmokers. Youth who smoked in the last month were also more likely to spend their time in the evening hanging around (59 %) than nonsmokers (38 %), and 84 % of those smokers had one or more of their parents smoking compared to 65 % of the nonsmokers. Of those same youth, 82 % said they had lectures or classes about smoking hazards, 12 % reported they would accept a cigarette from a friend, and 16 % of the boys and 4 % of the girls believed that smoking boys had more friends than nonsmokers.

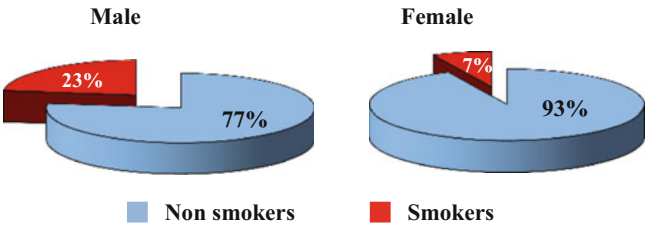

Fig. 7.4 Lifetime cigarette smoking

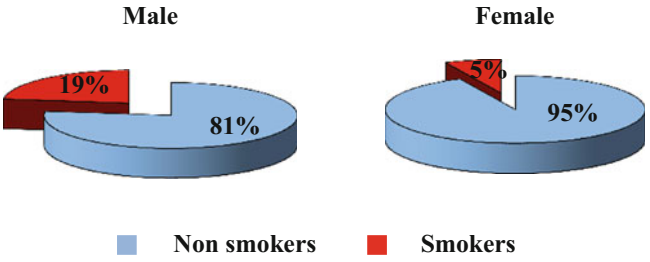

Fig. 7.5 Last month cigarette smoking

Interestingly, 23.3 % of boys and 9.7 % of girls believed that smoking makes boys look more mature. Ninety-one percent of the boys who smoked in the past month and 34 % of the girls have close friends that are smokers with 12 % of the youth reporting that they thought a smoking man is macho and 7 % think a smoking woman is sophisticated. Finally, once addicted to smoking, 89 % of boys and 94 % of girls believe it would be difficult to quit.

7.5 Discussion

This initiative was an extraordinary experience. First, it was a "true" test of the strength of the Palestinian and Israeli project personnel's ability to work together in a spirit of mutual respect and cooperation under adverse conditions to address the needs of high risk youth. This effort overcame war, implementation obstacles, teacher and social worker strikes, the death of a senior project staff member, and the need to revise and adapt the Project EX smoking cessation model as a brief intervention for both Israeli and Palestinian high-risk youth.

Project EX is an evidenced-based program and practice for adolescents that stress motivation, coping skills, and personal commitment. In the United States, it has been implemented/evaluated in numerous sites. Also, it has been implemented and evaluated in countries other than the United States (e.g., China, India, Russia, Spain, Thailand; currently being implemented in Korea). These results led the Israeli and Palestinian investigators to choose it over other interventions to promote smoking

cessation outcomes, cooperation, and knowledge sharing between practitioners and clients. The selection of Project EX was a "conscientious, explicit and judicious use of current evidence in making decisions" (Sackett, Richardson, Rosenberg, & Haynes, 1997, p. 71). However, consistent with the disadvantages of evidence-based programs (Jenson, 2007; Rubin, 2007), it was found early on that the well-defined Project EX curriculum needed modification to respond to Israeli and Palestinian teacher and student learning conditions. Specifically, Project EX was found not to be totally responsive to the culturally unique characteristics/circumstances of both the Israeli and Palestinian teachers and students. It was hard to integrate and implement the initiative with schools due to limitations such as the ability to allocate time for the eight-session intervention. Also, training and supervision was needed for those teaching/leading the intervention as well as other personnel involved, and there was stigma of smoking and denial among students and school personnel. In consultation with others, the project organizers believed the EX problems were manageable by means of various modifications and adaptations.

Consideration was given to qualitative research and modification of the originally conceived project-controlled trials and methodology. These expectations would have been reasonable in a stable environment, but this was not the case because of hostile conditions in the region among other obstacles. In response, a brief intervention approach building on a prospective research methodology was employed in spite of warnings that such an approach may not realize positive results.

Nevertheless, positive, tentatively promising, study results from this initiative were realized, affecting smoking attitudes and behavior among the participants as well as other "useful" information including: the identification of organization and implementation strategies (e.g., using specialized trainers as consultants to schools and youth centers rather than training teachers who may be reluctant and not motivated to take on additional responsibilities that are not remunerated by the school officials); the development of motivation and peer support activities creating a positive health environment and further stigmatizing smoking behavior (an important factor realized especially among Palestinian youth); the large percentage (i.e., nearly half) of the study participants who reported they did not recall school guidance about the dangers of smoking/cigarette use; the large percentage, 48 % of the Israeli and 27 % of the Palestinian youth who spend most of the evening/night hanging around in the streets, malls, playgrounds, and cafés; and, the contribution of a structured learning environment and lifestyle found among the religious students that tends to mitigate smoking attitudes and behavior.

Clearly, greater attention needs to be given to school-based education about the dangers of smoking; and, planned activities need to be made available for youth during nonschool hours especially in the evening/night. This recommendation takes on considerable importance because of the growing number of high-risk youth failing

and dropping out of school. After several years of declining numbers, the Israel Ministry of Education has reported an increase of almost 40 % in school dropouts in 2009, and many of the dropouts come from immigrant and Arab populations. The rate of former Soviet Union origin dropouts, grades 9–12, tends to be about twice the amount reported for youths of Israeli origin (Isralowitz, Reznik, & Straussner, 2011; Leshem & Sicron, 2004). On the Palestinian side, difficult living conditions and stress are factors influencing the increase of smoking among adolescents in spite of the prohibitive attitudes toward tobacco use.

In sum, this joint Middle East effort evidenced a brief intervention that has potential as a cost-efficient and effective smoking cessation model. However, further research is needed to confirm this outcome including its impact on other unfavorable behavior including violence, delinquency, and adolescent alcohol and drug use among Israeli and Palestinian youth.

7.6 Conclusion

Coordinated strategies that address tobacco availability, smoking policy enforcement, and smoking norms can help protect Israeli and Palestinian youth and their communities from the harms of smoking. From this initiative, the project organizers found that a brief intervention implemented by school/community coalitions has potential to reduce students' scores on an index of related consequences of adolescent smoking. The index included items such as attitudes and behavior. Benefits of the brief intervention tend to be school and community-wide affecting not only the smokers themselves but also those around them.

This project contributed to a growing body of evidence suggesting that strategic changes to the environment (e.g., school and surrounding community) can have a positive impact on attitudes and behavior among high risk youth. Using what is known as a school-/community-organizing approach, coalitions comprised of school and community agency administrators, teachers, youth workers, youth, and community leaders may want to consider this brief intervention for possible adaptation and application.

The Israeli and Palestinian project organizers and teams have come to realize that high-risk youth tobacco use and smoking is not just a school problem and it is not just a community problem. Those involved have come to realize that the smoking problem and other problem behavior among high-risk youth must be addressed by entire ecosystems.

Each school and community needs to select and implement specific strategies that address tobacco availability, harm reduction, social norms (i.e., correcting misperceptions about the rate of smoking among peers), and cigarette price/marketing. Several strategies need to be advanced. These include approaches to restrict the provision of cigarettes to underage youth, increase or improve coordination between schools, community youth workers and police (especially in the case of other substance use problem behavior—mostly related to alcohol), and establish consistent dis-

ciplinary actions resulting from policy violations. A systems approach should be considered (Sussman et al., 2012).

For more than 4 years, the Israeli and Palestinian project organizers were involved in this effort to develop, from an evidenced-based eight-session model, a three-session culturally adapted brief intervention addressing adolescent smoking habits and attitudes. Statistically significant decreases were found in cigarette use and attitudes through the brief intervention—enough to warrant further investigation and refinement of the intervention especially for people and places with limited resources dealing with high-risk populations and developing countries. Comparison groups, of course, are needed to understand naturally occurring or standard care cessation rates. Evidenced in focus group interviews of the Israeli participants, the restricted study cohort limits generalization of the current study results. Also, the data collected were based on self-reports of the participating youth who may have underreported (or in some cases over reported) their cigarette use.

From the brief intervention, the percentage of students reporting smoking-related attitudes and behavior decreased. It is particularly noteworthy that the brief intervention has contributed to promoting regional cooperation as well as an intervention that addresses a serious and common health and economic problem affecting the welfare of people throughout the region and elsewhere.

7.7 Future Directions

Finally, an important future step is to focus on methods to promote adoption and implementation of this brief intervention in schools and community agencies throughout the region. This model effort worked to reduce some of the important negative consequences of smoking among Palestinian and Israeli youth; it worked to promote peace in the region through understanding and efforts to address mutual interests and concerns.

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